

Press Release – For Immediate Release**NEC's Face Recognition Technology
Ranks First in NIST Testing for Third Consecutive Time**

*NEC Achieves Top Accuracy Score and 'Best-in-Class' Performance
in NIST's Face Recognition Vendor Test*

Irving, Texas – July 15, 2014 – NEC Corporation (NEC) along with NEC Corporation of America ([NECAM](#)), a leading provider and integrator of advanced IT, communications, managed services and biometric solutions, today announced that NEC's face recognition technology achieved the highest performance evaluation in the recent Face Recognition Vendor Test (FRVT) 2014 performed by the U.S. National Institute of Standards and Technology (NIST). Results were released in NIST's Interagency Report - *NISTIR 8009 - Performance of Face Recognition Algorithms*.^{*} The NIST report is widely viewed as the benchmark of determining which face recognition software solution is the most accurate for one-to-many searching under a variety of situations. ^{**}

NEC's technology took first place for the third consecutive time following the 2009 Multiple Biometric Grand Challenge (MBGC 2009) and 2010-2011 Multiple Biometrics Evaluation (MBE 2010-2011). The most recent FRVT test for one-to-many searching (class C) evaluated the accuracy of database enrollments and personal identity searches using massive volumes of face image data (over 1.6 million people), including multiple "high quality" criminal mugshots, "low quality" webcam snap shots, and "standard quality" passport/visa photo images.

Twelve commercial vendors and four academic institutions participated within the FRVT evaluation, which consisted of several test scenarios designed to determine accuracy based on measured error rates. Not only did NEC's search accuracy exceed competitors by a wide margin, it also improved significantly from the past MBE 2010 testing. In the test of rank one miss rates for recognition in a population size of 1.6 million, NEC achieved 4.1% followed with 9.1% for the second best vendor. Putting this in perspective between NEC and the second best vendor can mean missing 80,000 candidates already on rank 1.

Also, NEC's face recognition algorithms were faster than all participating vendors, requiring approximately 0.2 seconds per image to create and search an image against 1.6 million records. NEC's matching rate is more than 6.2 million matches per second per core. Overall, the NEC algorithms are typically twice as or up to more than 15 times faster than competitors' algorithms.

Moreover, according to NEC's own evaluation tests, it has significantly improved its "one-to-one" matching capabilities, where two face images are evaluated to determine if they are the same person, achieving an exceptional level of accuracy and reducing the authentication error rate by 2/3 when compared to its existing technologies.

"The NIST benchmark test provides objective and accurate evaluations through 'blind testing' of authentication technologies belonging to a wide range of companies. These tests are supported by leading organizations that include the U.S. Department of Homeland Security, the U.S. Department of Justice and the FBI, helping to attract attention from around the world as a highly reliable assessment," said Shigeki Yamagata, general manager, Information and Media Processing Laboratories, NEC Corporation.

“These results are extraordinary! When compared to the prior NIST MBGC 2009 and MBE 2010 testing in which NEC also registered the top ranking and superior performance, these improvements demonstrate that NEC is not only outperforming our competitors, but also advancing our own solution,” said Raffie Beroukhim, vice president of NECAM’s Biometrics Solutions Division. “NEC’s face recognition matching algorithm improved the most in one-to-many search accuracy as compared to the other industry participants.”

The NEC automated face recognition (AFR) solution is gaining wider acceptance in several new industries beyond its traditional use in law enforcement. Retail, hospitality and other businesses are realizing potential financial benefits and improved customer satisfaction by enhancing the customer experience with AFR.

Since the 1970s NEC has invested significant resources in the research and development of its biometric identification technologies, and has consistently achieved world-leading results in independent, third-party testing. These latest test results re-confirm NEC’s superior matching capabilities within the world of face recognition.

“The strength of NEC’s face recognition technology lies in its tolerance of poor quality, highly compressed surveillance videos and images,” said Beroukhim. “While facial recognition technology was once considered of marginal value, use of NEC’s face recognition technology is now leading to a higher rate of positive identifications in real life investigations where the accuracy of NEC distances itself from other face recognition technology providers and help keep our communities safe.”

* http://biometrics.nist.gov/cs_links/face/frvt/frvt2013/NIST_8009.pdf

** Results shown from the Multiple Biometric Evaluation 2010, the 2011 follow-up study, and the Face Recognition Vendor Test 2013 do not constitute endorsement of any particular product by the U.S. Government.

To learn more about NEC’s biometrics solutions, visit the [web site](#).

NEC information: www.necam.com

Blog: www.NECToday.com

LinkedIn: www.linkedin.com/company/nec-corporation-of-america

YouTube: www.youtube.com/interactiveNEC

Facebook fan page: www.necam.com/facebook

Twitter: @NEC

About NEC Corporation of America

Headquartered in Irving, Texas, NEC Corporation of America is a leading provider of innovative IT, network, communications and biometric products and solutions for service carriers, Fortune 1000 and SMB businesses across multiple vertical industries, including Healthcare, Government, Education and Hospitality. NEC Corporation of America delivers one of the industry’s broadest portfolios of technology solutions and professional services, including unified communications, wireless, voice and data, managed services, server and storage infrastructure, optical network systems, microwave radio communications and biometric security. NEC Corporation of America is a wholly-owned subsidiary of NEC Corporation, a global technology leader with a presence in 140 countries and \$29.5 billion in revenues. For more information, please visit www.necam.com.

NEC Media Contact:
Frank Puglia
NEC Corporation of America
214.262.3767
frank.puglia@necam.com